

REMARKS

Applicants acknowledge with appreciation the Examiner's careful consideration of the November 4, 2003 Amendment and, it would appear, the Supplemental Amendment of December 22, 2003. Applicants also acknowledge the Examiner's helpful indication of status in Paragraph Nos. 1-6 in the Office Action at page 2.

Applicants do, however, earnestly but respectfully request the Examiner to reconsider and withdraw the remaining rejection and pass this case onto allowance.

The editorial amendments to claims 1 and 11 find basis in the original specification at page 16, lines 14-19. The editorial amendments avoid new matter. The total number of claims has not increased. It is not seen that the editorial amendments present new issues or require a new search. Accordingly, please enter the amendments.

Upon entry of the Amendment, claims 1-8, 11-13 and 15 will remain pending. Claims 1 and 11 are independent claims.

Applicants respectfully traverse the rejection of claims 1-8, 11-13 and 15 under 35 U.S.C. §103(a) over the Haley et al. reference, U.S. Patent No. 5,393,812.

Claim 1 of the invention is about a flame retarding polypropylene fiber having a core-sheath structure and claim 11 is about a flame retarding polypropylene film having multiple layers in which at least one intermediate layer exists.

Especially as mentioned in amended claim 1, a polypropylene resin containing a phosphoric ester-based flame retardant and a NOR type hindered amine-based stabilizer that has flame retardancy and, when considered alone, has an odor is used for a core component while, as mentioned in amended claim 11, a polypropylene resin containing a phosphoric ester-based flame retardant and a NOR type hindered amine-based stabilizer that has flame retardancy and, when considered alone, has an odor is used for at least one intermediate layer.

The above-mentioned feature is supported by the disclosure in the specification on page 16, line 14-19, that the polypropylene resin containing the phosphoric ester-based flame retardant and the NOR type hindered amine-based stabilizer that has the flame retardancy and odor is used for the core component, which suppresses the odor as well as solving other problems.

Similarly, regarding the above-mentioned feature of claim 11, it is disclosed that the odor due to the HALS-based stabilizer can be suppressed while maintaining the flame retardancy, on page 23, line 23, to page 24, line 13.

Although the HALS-base stabilizer may have odor characteristics of amine-based compound, one of the good effects of this invention is that it prevents the odor and provides good flame retardancy at the same time. In a flame retarding polypropylene fiber having a core-sheath structure of this invention, the phosphoric ester-based flame retardant for giving flame retardancy to the fiber and the NOR type HALS-based stabilizer are applied to the core component. This application enables one to suppress the odor to an unnoticeable level and provide the good flame retardancy at the same time. In the case of mulit-layer polypropylene film according to the invention, the phosphoric ester-based flame retardant and the NOR type HALS-based stabilizer can be applied to or in at least one of intermediate layers, whereby one can suppress the odor satisfactorily, such as to an unnoticeable level, while still providing good flame retardancy.

On the other hand, as set forth in Applicants Amendment of November 4, 2003, Haley et al. neither discloses nor would it have suggested that the polypropylene resin including the phosphoric ester-based flame retardant and the NOR type hindered amine-based stabilizer (having flame retardancy and the odor) can be used for the core component of the core-sheath structured fiber or the intermediate layer of the multiple-layered flame retarding polypropylene film in order to suppress the odor characteristic of the HALS-based stabilizer while maintaining the flame retardancy.

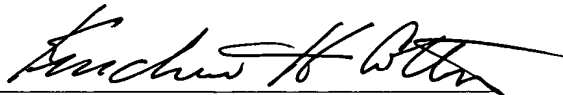
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Amdt. dated April 30, 2004
Reply to Office Action of January 26, 2004

Furthermore, the reference does not describe or teach that the strength of a fiber has any effect on the flame retardancy of the fiber. Furthermore, merely because a feature is "optimizable" does not mean that "discovery" is automatically obvious. Applicants draw attention their November 4, 2003 Amendment at pages 6 and 7. It is also respectfully pointed out that the rationale advanced in the Office Action is incompatible with the patent statutes, viz 35 U.S.C. §101 in view of 35 U.S.C. §100(a) ("the term 'invention' means invention or discovery"), that provide discoveries are patentable subject matter.

Applicants endeavored to respond completely and fully to all matters presented. Applicants respectfully suggest that their application is condition for allowance and earnestly solicit former notice of same.

Respectfully submitted,

FITCH, EVEN, TABIN & FLANNERY

By: 

Kendrew H. Colton
Registration No. 30,368

FITCH, EVEN, TABIN & FLANNERY
1801 K Street, NW
Suite 401L
Washington, DC 20006-1201
Telephone: (202) 419-7000
Facsimile: (202) 419 -7007

It seems unreasonable to assume that a person of ordinary skill in the art would have contemplated deviating from the explicit teachings of Serafino by dramatically decreasing the amount of spacing agent.

Additionally, besides failing to teach the relatively low level of spacing agent of the present dry clouding agents, Serafino would not have suggested increasing the amount of suspending agent to a level as in present claim 1.

As to the ratio TiO_2 : suspending agent, it is respectfully submitted that Serafino fails to disclose and would not have suggested dry clouding agents that contain such components within a weight ratio of between 1:1.1 and 1:3. Example 2 of Serafino discloses dry clouding agents that contain titanium dioxide and suspending agent in a weight ratio that is well above and well-outside the range recited in present claim 1.

The dry clouding agent according to the present invention would have been unobvious over Chuang et al. and/or Serafino.¹

Finally, Applicants respectfully submit claims 6 and 9 define novel and unobvious inventions over the Serafino et al. reference. Applicants respectfully traverse the view that the weight ratio of titanium dioxide to suspending agent required by present claim 1 is not disclosed by either Chuang et al. or Serafino. The subject matter of claim 6 is deemed unobvious vis-a-vis Chuang et al. and Serafino for the reasons set out above in relation to claim 1.

With regard to the rejection of claim 9 as being anticipated by Serafino, Applicants respectfully submit that this dependent claim is novel and inventive over said document for reasons stated herein above.

¹If the Examiner disagrees with this, she is requested to point out where in these documents suggestions can be found to a) increase the percentage of suspending agent; b) decrease the amount of spacing agent; and c) increase the percentage of suspending agent relative to the percentage of TiO_2 in order to arrive at the present dry clothing agent.

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Applicants therefore earnestly but respectfully submit their application merits an allowance and formal notice to that effect is respectfully solicited.

Respectfully submitted,

FITCH, EVEN, TABIN & FLANNERY

By: 

Kendrew H. Colton
Registration No. 30,368

FITCH, EVEN, TABIN & FLANNERY
1801 K Street, NW
Suite 401L
Washington, DC 20006-1201
Telephone: (202) 419-7000
Facsimile: (202) 419 -7007